

Application No.: 10/525,814  
Art Unit: 2611

Response under 37 CFR §1.116  
Attorney Docket No.: 052152

### **REMARKS**

Claims 1, 4, 6, 8 and 9 are pending in the application. By this Amendment, claim 1 has been amended. No new matter has been added. It is respectfully submitted that this Amendment is fully responsive to the Office Action dated February 19, 2009.

#### **Claim Rejections - 35 U.S.C. §103(a):**

Claims 1, 4, 8 and 9 are rejected under 35 U.S.C. §103(a) as being unpatentable over Naoki Suehiro et al., for the same reasons as set forth in the last Office Action.

Claim 6 is rejected under 35 U.S.C. §103(a) as being unpatentable over Naoki Suehiro et al. as applied to claim 1 above, and further in view of Kelsuke Higuma et al., for the same reasons as set forth in the last Office Action.

Each of these rejections is respectfully traversed.

With regard to Applicants' argument that Suehiro does not disclose or suggest the transmission data sequences of claim 1 having a data structure wherein a plurality of transmission data arranged with 0 data of a predetermined length added between the plurality of the transmitted data, the Examiner disagrees and asserts on page 2 of the Office Action the following:

The reference of Suehiro, who is the inventor in the present application, does suggest the transmission data sequences of claim 1 having a data structure wherein a plurality of transmission data are arranged with 0 data of a predetermined length added between the plurality of the transmission data. (See sections 1-4. Especially section 4.2, equation 7)

Section 4.2 of the Suehiro reference relates to an information transmission method which indicates that the transmitted signal is represented by equation (7). However, while equation (7) may include 0s in the transmitted signal, the 0s are not of a predetermined length added between the plurality of transmission data.

The Examiner appears to acknowledge this deficiency of Suehiro, since the Examiner takes the position on page 3, lines 1-2 of the Action that “section 4 does suggest the insertion of 0s to produce a plurality of transmission data sequences.” However, the Examiner does not indicate that section 4 suggests the insertion of 0s of a predetermined length between the plurality of transmission link.

Claim 1 has been amended such that it is clear that the null time is of a predetermined length when no signal is generated. More specifically, claim 1, as amended, now calls for

*producing a plurality of transmission data sequences*

$$S_{A,X}=(x_0A, 0...0, x_1A, 0...0, x_2A, 0...0, ..., x_{m-1}A, 0...0)$$

$$S_{B,Y}=(y_0B, 0...0, y_1B, 0...0, y_2B, 0...0, ..., y_{m-1}B, 0...0)$$

...

*(0...0 indicates a null time of a predetermined length where no signal is generated)*

Regarding the “producing a plurality of transmission data sequences” feature of claim 1, the Examiner provides a reference in support of the Official Notice taken in the previous Office Action that the use of guard bands is well known in the art. The Taub reference titled, “Principles of Communication Systems,” discusses the use of guard bands in sampled signals (in Fig. 5.1-3(a)) being always required in practice, since a filter with infinitely sharp cutoff is not realizable. See, pages 187-188 of Taub. The guard band as described in Taub appears to be when the signal transmitted is zero. See, Fig. 5.1-3.

Applicants disagree with the Examiner’s characterization of Taub as the excerpt cited by the Examiner concerns the sampling theorem as related to low-pass signals. The sampling theorem involves, in general, taking samples of signals periodically every  $T_s$  seconds where  $T_s$  is the sampling time and then multiplying the sampled signals by the sinc function to shift and scale the sampled signal. The Taub reference does not teach or fairly suggest the use of guard bands in a signal such as those of the Suehiro reference.

In Suehiro, there is no teaching or suggestion to use the guard bands of the Taub reference in the periodic sequences or pseudo-periodic signals of Suehiro. Neither the Suehiro reference nor the Taub reference (either alone or in combination) teaches or fairly suggests all of the features of claim 1, specifically, the *producing a plurality of transmission data sequences*

$$S_{A,X}=(x_0A, 0...0, x_1A, 0...0, x_2A, 0...0, ..., x_{m-1}A, 0...0)$$

$$S_{B,Y}=(y_0B, 0...0, y_1B, 0...0, y_2B, 0...0, ..., y_{m-1}B, 0...0)$$

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*(0...0 indicates a null time of a predetermined length where no signal is generated)* feature of claim 1.

Even if Suehiro and Taub were to be combined, there is no support for the Examiner's assertion that the resulting signal would be that of claim 1. The addition of the guard bands of Taub would fundamentally change the signals of the Suehiro reference. Neither reference provides a reasonable expectation that signal resulting from the combination of Suehiro and Taub would resemble or function the same as the signals of claim 1.

In light of the above, Applicants respectfully argue that there is no motivation or reason for one of skill in the art to combine the Taub and Suehiro references and there is no reasonable expectation of successfully producing the claimed invention upon combination of these references. Therefore, Applicants submit that the rejection is improper and, thus, request that it be withdrawn.

In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

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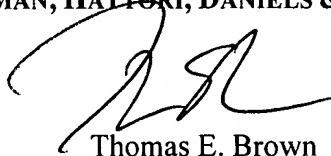
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If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

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